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Spectroscopic Ellipsometry of Gadolinium Gallium Oxide Multilayers KALEB GILBERT, KUNAL BHATNAGAR, STEVE JACKSON, Angelo State University, RAVI DROOPAD, WILHELMUS GEERTS, Texas State University — The dielectric parameters of Gadolinium Gallium Oxide (GGO) multilayer structures have been investigated with spectroscopic ellipsometry and modeled with a simplified modeling technique. The GGO thin films are of varying thickness and the simple four parameter model was effective in determining consistent values for the dielectric constants of this important high k dielectric material. Ellipsometric data was collected in two different acquisition configurations to insure the merit of the model. The model is further confirmed by the determination of film thickness values within an acceptable range when compared with those reported by the sample grower. The dielectric parameters are then used to determine the band gap of GGO.

Toni Sauncy
Angelo State University

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